# WALTER F. ZEHNER, III, P.E. CONSULTING ENGINEER

CONSISTENCY ENGINE

4702 Toulouse Street New Orleans, Louisiana 70119 TELEPHONE: (504) 488-1442 FACSIMILE: (504) 488-1448

June 22, 2015

Department of Safety and Permits City of New Orleans New Orleans, LA 70130

Re: Permit Nos. 13-43014-NEWC/13-43016-NEWC

1031 Canal Street New Orleans, LA

Dear sirs,

The design load of 25 tons per pile on the timber piles at 1031 Canal Street is based upon the pile load test performed by Stratum Engineering, LLC, dated July 27, 2012, provided herein, and is in accordance with foundation design requirements of the 2006 International Building Code.

Yours very truly,

Valter F. Zehner, III

MALTER F. ZEHNER 17 • REG. No. 14629 REGISTERED

PROFESSIONAL ENGINEER
IN
FAIGUREER



# REPORT OF PILE LOAD TEST FOR PILES UNDER STATIC AXIAL COMPRESSIVE LOAD

# FOR THE SAENGER THEATER REDEVELOPMENT 1101 CANAL STREET NEW ORLEANS, LOUISIANA

TESTED FOR BROADMOOR L.L.C. 2740 NORTH ARNOULT ROAD METAIRIE, LOUSIANA

ATTN: MR. SKENDER KEK

**REPORT NO: C12-010-40** 

**JULY 27, 2012** 

# TABLE OF CONTENTS

Project Information	1
Scope of Work	
Load Test Procedure	
Vibration Monitoring	2
Pile Driving Data	2
Loading Schedule and Record of Settlement	3
Summary and Conclusion	

APPENDIX

Load versus Settlement Curve Vibration Monitoring Records Report of Equipment Calibration

# **PROJECT INFORMATION**

Stratum Engineering, LLC (SE) was authorized to perform one (1) pile load test for the Saenger Theater Redevelopment on Canal Street and Basin Street in New Orleans Louisiana. Authorization to perform the pile load test was provided through a contract between Broadmoor and SE to provide testing and inspection services for the project. The work was performed in accordance with our Proposal C11-043R, dated September 14, 2011.

# **SCOPE OF WORK**

The scope of work included monitoring the driving of one (1) large timber test pile and loading the pile to 50 tons or failure, whichever occurs first, in accordance with ASTM D1143 standard procedure. The purpose of the load test was to verify the pile design capacity of 12 tons. In addition, the scope included vibration monitoring during pile driving to collect data for others to establish threshold level for vibration during construction.

# **LOAD TEST PROCEDURE**

One (1) static axial compressive load test was performed on a large timber test pile TP-1 driven at a non-permanent location near the building addition footprint to a depth of about 41 feet below the existing ground surface. Since the building piles will be tipped in the sand with a pile cut off elevation about 13 feet below the street level, the pile was driven within an 18 inch diameter steel casing reamed out to a depth of 13 feet to disengage friction contributed by the upper 13 feet of the pile and to simulate the loading condition the pile will undergo. The pile was load tested after a waiting period of 14 days. The load was applied to the test pile with a calibrated hydraulic jack and load cell assembly placed on the test pile and jacked against a steel beam extending over the top of the test pile. The steel beam was secured in place by a reaction frame anchored by 2 H piles installed to a depth of 65 feet. The load was applied to the test pile in one and one half (1.5) ton increments up to 50 tons in general accordance with ASTM D1143, "The Quick Load Method". The load was then released in four (4) equal decrements and the settlement after rebound was monitored for 30 minutes.

Settlement of the pile was determined by securing readings with an engineer's level trained on scales calibrated in 100ths of an inch. A second measuring system consisted of a piano wire, a mirror and a scale calibrated to 100ths of an inch set on one side of the pile conforming to the requirements of the governing standard. Benchmarks were also established for the test pile, which were verified each time the pile settlement was checked. Records of the pile settlement are included in subsequent sections of the report. The pile load versus settlement curve is included in the appendix.

# **VIBRATION MONITORING**

Vibration was monitored during installation of the piles. Pile driving induced vibration was measured using mini-seis seismograph, Serial #4866. The monitor was set near the adjacent building at the corner of Rampart and Iberville Street. A peak particle velocity ranging between 0.045 to 0.085 inch per second (ips) was recorded during the driving of the test pile and the reaction piles which were located about 50 to 80 feet from the monitor. A peak particle velocity of 0.44 ips was recorded while the crane was moving the wooden matts across the site. Detailed records of vibrations are included in the appendix.

# PILE DRIVING DATA

Three (3) piles including the test pile and two (2) reaction piles were driven by MR Pittman Group, L.L.C. The test pile was inspected at the site prior to driving. The test pile was driven near the proposed building addition at a non-permanent location. The test pile was driven on July 11, 2012 using a Vulcan 01 air activated hammer developing 15,000 ft-lbs. of energy per blow. The H piles were driven using a vibratory hammer (MKT Model V-20) to a depth of 41 feet then advanced to a penetration depth of 65 feet using a Vulcan 01 air activated hammer. The reaction piles were not monitored by SE. Therefore, the dimensions and penetration resistance of the test pile only are tabulated below:

Pile No.	TP-1		
Tip Diameter,	7		
in.	/		
Butt	13 1/2		
Diameter, in.	13 1/2		
Length, ft	52		
Penetration	41		
Depth, ft	41		
0-13	WOH		
14	2		
15	2		
16	1		
17	1		
18	WOH		
19			
20			
21			
22			
23	<b>*</b>		

Pile No.	TP-1
24	WOH
25	
26	
27	
28	
29	\ \
30	2
31	2
32	2
33	2
34	2
35	2
36	2
37	2
38	2
39	3
40	20
41	25 @ 4"

WOH – weight of hammer

# LOADING SCHEDULE AND RECORD OF SETTLEMENT

TEST PILE NO: TP-1

DATE TESTED: July 25, 2012

TIME	ELAPSED	LOAD IN	SETTLEMENT I	N INCHES	REMARKS
HOURS	MIN		ENGINEER'S LEVEL	PIANO WIRE	
9:00 am		1.5			Increment #1
9:01 am	1		0.01	0.01	
9:03 am	3		0.01	0.01	
9:05 am	5		0.01	0.01	
		3			Increment #2
9:06 am	1		0.02	0.01	
9:08 am	3		0.02	0.01	
9:10 am	5		0.02	0.01	
		4.5			Increment #3
9:11 am	1		0.04	0.03	
9:13 am	3		0.04	0.03	
9:15 am	5		0.04	0.03	
		6			Increment #4
9:16 am	1		0.05	0.04	
9:18 am	3		0.05	0.04	
9:20 am	5		0.05	0.04	
		7.5			Increment #5
9:21 am	1		0.06	0.04	
9:23 am	3		0.06	0.04	
9:25 am	5		0.06	0.04	
		9			Increment #6
9:26 am	1		0.07	0.05	
9:28 am	3		0.07	0.05	
9:30 am	5		0.07	0.05	
		10.5			Increment #7
9:31 am	1		0.08	0.07	
9:33 am	3		0.08	0.07	
9:35 am	5		0.08	0.07	
		12			Increment #8
9:36 am	1		0.10	0.08	
9:38 am	3		0.10	0.08	
9:40 am	5		0.10	0.08	

TIME	ELAPSED LOAD IN SETTLEMENT IN INCHES			N INCHES	REMARKS
HOURS	TIME, MIN	TONS	ENGINEER'S LEVEL	PIANO WIRE	=
		13.5			Increment #9
9:41 am	1		0.11	0.09	
9:43 am	3		0.11	0.09	
9:45 am	5		0.11	0.09	
		15			Increment #10
9:46 am	1		0.12	0.10	
9:48 am	3		0.12	0.10	
9:50 am	5		0.12	0.10	
		16.5			Increment #11
9:51 am	1		0.13	0.11	
9:53 am	3		0.13	0.11	
9:55 am	5		0.13	0.11	
		18			Increment #12
9:56 am	1		0.15	0.13	
9:58 am	3		0.15	0.13	
10:00 am	5		0.15	0.13	
		19.5			Increment #13
10:01 am	1		0.16	0.14	
10:03 am	3		0.16	0.14	
10:05 am	5		0.16	0.14	
		21			Increment #14
10:06 am	1		0.18	0.16	
10:08 am	3		0.18	0.16	
10:10 am	5		0.18	0.17	
		22.5			Increment #15
10:11 am	1		0.21	0.18	
10:13 am	3		0.21	0.18	
10:15 am	5		0.21	0.18	
		24			Increment #16
10:16 am	1		0.23	0.20	
10:18 am	3		0.23	0.20	
10:20 am	5		0.23	0.20	
		25.5			Increment #17
10:21 am	1		0.24	0.22	
10:23 am	3		0.24	0.22	
10:25 am	5		0.24	0.22	

TIME	ELAPSED	SED LOAD IN SETTLEMENT IN INCHES		REMARKS	
HOURS	TIME,	TONS	ENGINEER'S	PIANO	
	MIN		LEVEL	WIRE	
		27			Increment #18
10:26 am	1		0.26	0.22	
10:28 am	3		0.26	0.22	
10:30 am	5		0.26	0.22	
		28.5			Increment #19
10:31 am	1		0.28	0.25	
10:33 am	3		0.28	0.27	
10:35 am	5		0.29	0.27	
		30			Increment #20
10:36 am	1		0.30	0.29	
10:38 am	3		0.31	0.29	
10:40 am	5		0.31	0.29	
		31.5			Increment #21
10:41 am	1		0.34	0.31	
10:43 am	3		0.34	0.31	
10:45 am	5		0.34	0.31	
		33			Increment #22
10:46 am	1		0.35	0.33	
10:48 am	3		0.35	0.33	
10:50 am	5		0.35	0.33	
		34.5			Increment #23
10:51 am	1		0.38	0.36	
10:53 am	3		0.38	0.36	
10:55 am	5		0.38	0.36	
		36			Increment #24
10:56 am	1		0.40	0.38	
10:58 am	3		0.40	0.38	
11:00 am	5		0.41	0.38	
		37.5			Increment #25
11:01 am	1		0.42	0.40	
11:03 am	3		0.42	0.40	
11:05 am	5		0.42	0.40	
		39			Increment #26
11:06 am	1		0.45	0.42	
11:08 am	3		0.45	0.43	
11:10 am	5		0.45	0.43	

TIME ELAPSED LOAD IN			SETTLEMENT I	N INCHES	REMARKS
HOURS	TIME,	TONS	ENGINEER'S	PIANO	
	MIN		LEVEL	WIRE	
		40.5			Increment #27
11:11 am	1		0.47	0.45	
11:13 am	3		0.48	0.45	
11:15 am	5		0.48	0.45	
		42			Increment #28
11:16 am	1		0.51	0.47	
11:18 am	3		0.51	0.47	
11:20 am	5		0.51	0.48	
		43.5			Increment #22
11:21 am	1		0.53	0.50	
11:53 am	3		0.53	0.51	
11:25 am	5		0.53	0.51	
		45			Increment #23
11:26 am	1		0.54	0.52	
11:28 am	3		0.55	0.52	
11:30 am	5		0.55	0.52	
		46.5			Increment #24
11:31 am	1		0.57	0.53	
11:33 am	3		0.57	0.53	
11:35 am	5		0.57	0.53	
		48			Increment #25
11:36 am	1		0.61	0.57	
11:38 am	3		0.61	0.57	
11:40 am	5		0.61	0.58	
		49.5			Increment #26
11:41 am	1		0.62	0.60	
11:43 am	3		0.62	0.60	
11:45 am	5		0.62	0.60	
		50			Increment #26
11:46 am	1		0.64	0.61	
11:48 am	3		0.64	0.61	
11:50 am	5		0.64	0.61	

TIME	ELAPSED	LOAD IN	SETTLEMENT IN INCHES		REMARKS
HOURS	TIME, MIN	TONS	ENGINEER'S LEVEL	PIANO WIRE	
		37.5			Decrement #1
11:51 am	1		0.57	0.55	
11:53 am	3		0.57	0.55	
11:55 am	5		0.57	0.55	
		25.5			Decrement #2
11:56 am	1		0.47	0.44	
11:58 am	3		0.47	0.44	
12:00 pm	5		0.47	0.43	
		12			Decrement #3
12:01 pm	1		0.33	0.30	
12:03 pm	3		0.33	0.30	
12:05 pm	5		0.33	0.30	
		0			Decrement #4
12:06 pm	1		0.18	0.16	
12:08 pm	3		0.18	0.16	
12:10 pm	5		0.18	0.15	
12:40 pm	30		0.18		Held Zero 30 Min.

## **SUMMARY AND CONCLUSION**

The test pile was driven on July 11, 2012 and loaded on July 25, 2012 after a fourteen (14) day waiting period. The pile was installed within an 18 inch diameter casing reamed out to about 13 feet to disengage friction in the upper 13 feet of the pile and simulate the loading condition exerted on the pile. The test pile was located at the northeast corner of the site near the intersection of Iberville and Rampart Street.

The large timber test pile TP-1 was loaded in 1.5 ton increments up to 50 tons. The pile maintained each load increment up to 50 tons with little or no movement after the initial application of each load increment. At 50 tons, a total of 0.64 inch of settlement was recorded. The test load was then removed in four equal decrements and the settlement was monitored for 5 minutes. The net settlement measured after the rebound period of 30 minutes was 0.18 inch.

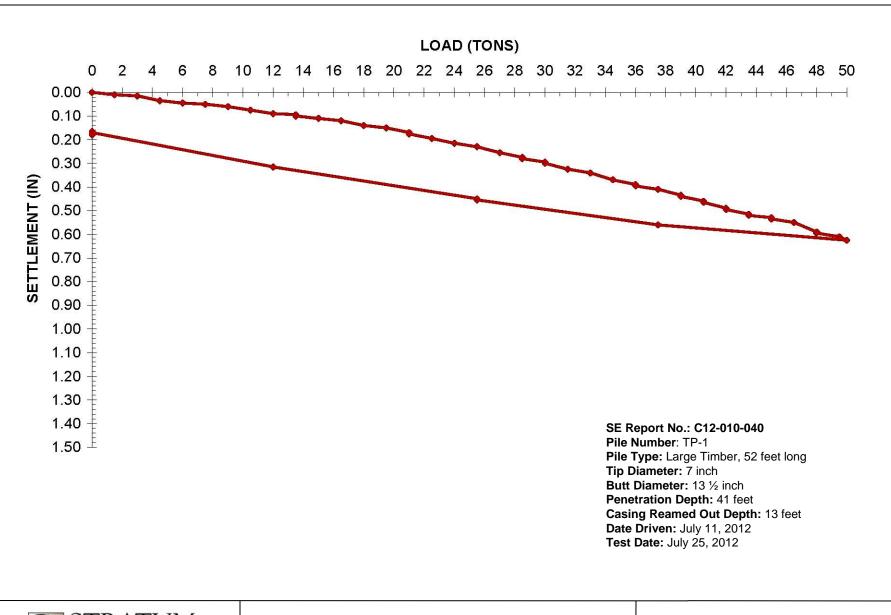
Based on the load test results, the large timber pile meets the allowable design load capacity of 12 tons. If you should have any questions, please do not hesitate to call.

Respectfully Submitted, Stratum Engineering, LLC

Ryan Kaufmann Project Manager Tony Maroun, P.E. Principal

# **APPENDIX**







LOAD VS. SETTLEMENT GRAPH

SE PROJECT NO: C12-10

Saenger Theatre Redevelopment

New Orleans, Louisiana



# STRATUM ENGINEERING, LLC 148 W HOWZE BEACH ROAD, SLIDELL, LOUISIANA

VIBRATION / ACOUSTICAL MONITORING REPORT

					1
noor, LLC		PROJECT: Sae	nger Theater Redevel	opment-2012	SCALE: 0 TO 2.5 IPS
		MONITOR NUMBER: 4866			
iegler		ACOUSTICAL	NSTRUMENTS: MS	-2G	WO No. 5043
	DIS	TANCE	MAXIMUM PPV		
LOCATION #	FROM	SOURCE	(IN/SEC)	DESCRIPTION OF WORK	
1	50 ft.	to 75 ft.	0.045		
			0.085		
		_			
: MKT V-20 Vibratory H	ammer				
,					
adings in excess of 0.2	5 IPS were re	corded on this c	ate.		
: 1) Intersection of Bas	in St. and Ibe	erville St. (New C	rleans, LA)		
		,	,		
	1 1 : MKT V-20 Vibratory H adings in excess of 0.2	LOCATION # FROM  1 50 ft.  1 50 ft.  1 SWART V-20 Vibratory Hammer  adings in excess of 0.25 IPS were re-	MONITOR NUM  Tiegler  DISTANCE FROM SOURCE  1 50 ft. to 75 ft. 1 50 ft. to 75 ft.  Which is a second of the second	MONITOR NUMBER: 4866     Ciegler	MONITOR NUMBER: 4866  diegler ACOUSTICAL INSTRUMENTS: MS-2G    DISTANCE



# STRATUM ENGINEERING, LLC 148 W HOWZE BEACH ROAD, SLIDELL, LOUISIANA

VIBRATION / ACOUSTICAL MONITORING REPORT

TESTED FO	ESTED FOR: Broadmoor, LLC PF			PROJECT: Sa	enger Theater Redevel	opment-2012	SCALE: 0 TO 2.5 IPS
DATE: 7-11	-2012			MONITOR NUMBER: 4866			
TECHNICIA	N: Sandee	Frickey		ACOUSTICAL	INSTRUMENTS: MS	3-2G	WO No. 5055
			DIS	TANCE	MAXIMUM PPV		
TIM	IE .	LOCATION #	FROM	1 SOURCE	(IN/SEC)	DESCRIPTION OF WORK	
6:57 AM	1:20 PM	1	70 ft	t. to 80 ft.	0.440	Driving 52 ft. large timber test pile.	
1:32 PM	4:19 PM	2	60 ft	t. to 70 ft.	0.060	Driving 52 ft. large timber test pile.	
VIBRATION	SOURCE:	Vulcan 01 hammer - g	generating 1	5,000 ftlbs. of e	nergy per blow.		
NOTIFICAT	ION: Contra	actor was notified of al	I readings in	excess of 0.25 I	PS recorded on this da	te.	
MONITOR L	OCATION	: 1) NW corner of build	ding at 1101-	·1199 Iberville St	i.		
REMARKS:	Crane mov	ving matts cause the hi	igh reading c	of 0.44 IPS at 9:5	52am.		

**Beerman Precision, Inc.** 4206 Howard Avenue, New Orleans, LA 70125 504-207-6023 Fax: 504-207-6044

# LOAD CELL CALIBRATION REPORT

CUSTOMER:	STRATUM ENGINEERING	PROJECT: PILE TEST
ORDER NO:	6230	DATE: July 24, 2012
LOAD CELL	MEA3000-300-3, 150 TON C/H	SERIAL NO: 09-126
INDICATOR	VISHAY P3 DIGITAL READOUT	SERIAL NO: 191221
Load Cell, S/N 940	<ol> <li>with the digital readout indicator, S/N ASTM E4 and to be within a 1% tolerand</li> </ol>	oad Cell. Calibration was performed utilizing our 500-Ton Master 189935. The Master Load Cell was calibrated on MARCH 22, 2012 ce. Results of your current calibration are shown on the following enheit
READOUT IN	DICATOR INITIAL SETTINGS	IMPORTANT
AMP ZERO: FS Mv/V (GF):	N/A +/-0002 1.300 +/-0001	CONNECT ALL WIRES TO TERMINAL POST LISTED IN INITIAL SETTINGS  TURN ON POWER. LET LOAD CELL

READOUT I	NDICATOR INI	TIAL SETTINGS
AMP ZERO: FS Mv/V (GF):	N/A 1.300	+/-0002 +/-0001
BALANCE:  MATCH THE FOL  LC WIRE COLOR	0.0 LOWING TO INDI	+/-0002 CATOR:
BLK/GRN WIRE BLACK WIRE WHITE WIRE RED WIRE		

CONNECT ALL WIRES TO TERMINAL POST LISTED IN INITIAL SETTINGS
TURN ON POWER. LET LOAD CELL WARM UP FOR 15-20 MINUTES.
CHECK ALL <b>INITIAL SETTINGS</b> BY PRESSING APPROPRIATE BUTTON. RESET TO SETTINGS LISTED IF NOT WITHIN TOLERANCE.
READ ATTACHED INSTRUCTIONS AND REVIEW HYDRAULIC SCHEMATIC

Ву: Date: July 24, 2012

BEERMAN PRECISION, INC.

**Beerman Precision, Inc.** 4206 Howard Avenue, New Orleans, LA 70125 504-207-6023 Fax: 504-207-6044

# LOAD CELL CALIBRATION REPORT

CUSTOMER: STRATUM ENGINEERING

PROJECT: PILE TEST

CONTRACT NO: 6230

DATE: July 24, 2012

LOAD CELL: MEA3000-300-3, 150 TON C/H

SERIAL NO: 09-126

INDICATOR: VISHAY P3 DIGITAL READOUT

SERIAL NO: 191221

STANDARD LOAD		AVE OUTPUT			
(TONS)	1ST RUN	2ND RUN	3RD RUN	OF LOAD CELL	
0.0	0	0	0	0	
1.5	1.5	1.4	1.5	1.5	
3.0	3.0	3.0	3.1	3.0	
4.5	4.6	4.6	4.6	4.6	
6.0	6.1	6.2	6.2	6.2	
7.5	7.6	7.7	7.7	7.7	
9.0	9.1	9.3	9.3	9.2	
10.5	10.7	10.7	10.8	10.7	
12.0	12.2	12.5	12.3	12.3	
13.5	13.8	13.9	13.9	13.9	
15.0	15.3	15.5	15.4	15.4	
16.5	16.8	17.0	17.0	16.9	
18.0	18.3	18.6	18.6	18.5	
19.5	19.9	20.0	20.0	20.0	
21.0	21.5	21.6	21.5	21.5	
22.5	23.0	23.2	23.1	23.1	
24.0	24.5	24.7	24.7	24.6	
25.5	26.1	26.1			
27.0	27.6	27.7	27.7	26.1 27.7	
28.5	29.1			29.2	
30.0	30.6	30.7	30.7	30.7	
31.5	32.1	32.2	32.3	32.2	
33.0	33.6	33.7	33.8	33.7	
34.5	35.1	35.2	35.2	35.2	
36.0	36.7	36.7	36.7	36.7	
37.5	38.2			38.2	
39.0	39.7	The second secon		39.7	
40.5	41.2	41.1	39.7 41.2	41.2	
42.0	42.7	42.6	42.7	42.7	
43.5	44.2	44.1	44.2	44.2	
45.0	45.6	45.6	45.7	45.6	

BY: DOM 6

DATE: July 24, 2012

**Beerman Precision, Inc.** 4206 Howard Avenue, New Orleans, LA 70125 504-207-6023 Fax: 504-207-6044

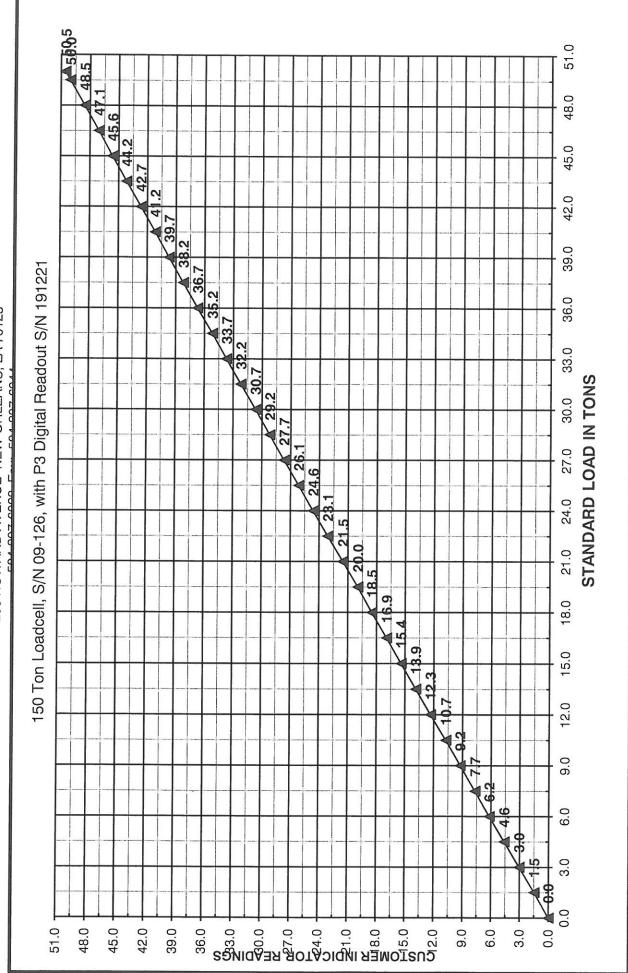
# LOAD CELL CALIBRATION REPORT(CONT'D)

CUSTOMER: STRATUM ENGINEERING	PROJECT: PILE TEST
REPORT NO: 6230	DATE: July 24, 2012
CYLINDER: MEA3000-300-3, 150 TON C/H	SERIAL NO: 09-126
GAUGE: VISHAY P3 DIGITAL READOUT	SERIAL NO: 191221

	AVE OUTPUT		
1ST RUN	2ND RUN	3RD RUN	OF LOAD CELL
		47.1	47.1
	48.5	48.6	48.5
50.1	50.0	50.0	50.0
50.6	50.5	50.5	50.5
		47.1     47.0       48.5     48.5       50.1     50.0	1ST RUN         2ND RUN         3RD RUN           47.1         47.0         47.1           48.5         48.5         48.6           50.1         50.0         50.0

# Beerman Precision, Inc.

4206 HOWARD AVENUE NEW ORLEANS, LA 70125



# Beerman Precision, Inc.

4206 Howard Avenue, New Orleans, LA 70125 504-207-6023 Fax: 504-207-6070

# JACK CALIBRATION REPORT

CUSTOMER: STRATUM ENGINEERING	PROJECT: PILE TEST
CONTRACT NO: 6230	DATE: July 24, 2012
CYLINDER: RC756	SERIAL NO: <u>1907</u>
GAUGE: 6IN. WIKA, 10,000 PSI GAUGE	SERIAL NO: Z7006JF

This report covers the results of Calibration for the above Hydraulic Cylinder. Calibration was performed utilizing our 500-Ton Master Load Cell, S/N 9403, with the digital readout indicator, S/N 189935. The Master Load Cell was recently calibrated on March 22, 2012 in accordance with ASTM E4 and is within a 1% tolerance. Results of current calibration are shown on the following pages:

Temperature during test

82 Degrees Fahrenheit

Date: July 24, 2012

# Beerman Precision, Inc.

4206 Howard Avenue, New Orleans, LA 70125 504-207-6023 Fax: 504-207-6070

# PRESSURE GAUGE CERTIFICATION

CUSTOMER: STRATUM ENGINEERING	PROJECT: PILE TEST
CONTRACT NO: 6230	DATE: July 24, 2012
GAUGE: 6IN. WIKA; 10,000 PSI GAUGE	SERIAL NO: Z7006JF

We certify the above hydraulic pressure gauge has been tested against our primary standard, an Amthor Dead Weight Tester and found to be within an accuracy of +/- 1/2% of full scale. The Amthor Tester was last certified on May 29, 2012 to 0.1% accuracy and traceable to the National Institute of Standards and Technology (NIST).

Standard Pressure (PSI) Your Pressure Gauge (PSI)

0	0
1000	1050
2000	2050
3000	3050
4000	4050
5000	5050
6000	6050
7000	7050
8000	8050
9000	9050
10,000	10,000

By:

Date:

July 24, 2012

BEERMAN PRECISION, INC.

Beerman Precision, Inc. 4206 Howard Avenue New Orleans, LA 70125 504-207-6023 Fax: 504-207-6070

# JACK CALIBRATION REPORT

CUSTOMER: STRATUM ENGINEERING	PROJECT: PILE TEST	<u> </u>
CONTRACT NO: 6230	DATE: July 24, 2012	
CYLINDER: RC756	SERIAL NO: 1907	
GAUGE: 6IN. WIKA; 10,000 PSI GAUGE	SERIAL NO: Z7006JF	

STANDARD LOAD	GAUGE READINGS IN PSI AT PISTON EXTENSION OF					AVE GAUGE
(TONS)	1 INCH	ES 3	3 INCHES 5		INCHES	PRESSURE
1.5	300		325		350	325
3.0	500		550	575		542
4.5	725		750		775	750
6.0	925		975		000	967
7.5	1125		1200		225	1183
9.0	1350		1400	1450		1400
10.5	1550	1	1600	1	675	1608
12.0	1750		1825	1	900	1825
13.5	1950	2	2050	2	125	2042
15.0	2175	2	2250		350	2258
16.5	2400	2	2475		550	2475
18.0	2600	2	2700		775	2692
19.5	2800	2	2925		000	2908
21.0	3000	3	3150		200	3117
22.5	3200	3	3375		425	3333
24.0	3400	3	3600		650	3550
25.5	3625	3	3800		875	3767
27.0	3850	4	4025		075	3983
28.5	4050	4	4250		300	4200
30.0	4275	4	4450		525	4417
31.5	4475	4	675	4750		4633
33.0	4675	4	1900	4950		4842
34.5	4875	5	5100	5175		5050
36.0	5075	5	325	5	400	5267
37.5	5275	5275 5550		5	600	5475
39.0	5500	5	750	5800		5683
40.5	5700	5	800	6000		5833
42.0	5900	6	200	6225		6108
43.5	6100	6	400	6425		6308
45.0	6325	6	600	6	650	6525
46.5	6550 1	6	6800		850	6733

DATE: \_\_\_\_ July 24, 2012

Beerman Precision, Inc. 4206 Howard Avenue New Orleans, LA 70125 504-207-6023 Fax: 504-207-6070

# JACK CALIBRATION REPORT(CONT'D)

CUSTOMER: STRATUM ENGINEERING	PROJECT: PILE TEST
REPORT NO: 6230	DATE: July 24, 2012
CYLINDER: RC756	SERIAL NO: 1907
GAUGE: 6IN. WIKA; 10,000 PSI GAUGE	SERIAL NO: Z7006JF

STANDARD LOAD	GAUGE READINGS IN PSI AT PISTON EXTENSION OF					AVE GAUGE	
(TONS)	<u>1</u>	INCHES	3	INCHES	5	INCHES	PRESSURE
48.0	6	750	7000		7050		6933
49.5		000	7125		7250		7125
50.0	70	075	7175		7325		7192
	***						
		1					
					.=		
							A SAN WALL
	27 Sept. 32 - 27						
S 200 (1) (1) (2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1							
							49

Beerman Precision, Inc. 4206 Howard Ave. New Orleans, LA 70125 504-207-6023

